

KSEZENKO, I.Ye. (Yaroslavl')

Sulfanilamide therapy of trachoma. Vest. oft. 33 no. 4:26-30
(MLRA 7:8)
Jl-Ag '54.
(TRACHOMA, therapy,
*streptocide)

KSENZENKO, I. Ye.

The Experience With Treatment of Blepharitis by Gramicidine
Combined With Sulphanilamides

Voyenno-meditsinskiy zhurnal, No. 4, April 1956

KSENZENKO, I. Ye.
KSENZENKO, I. Ye.

Lindau-von Hippel disease; author's abstract. Vest. oft. 70 no.6:
39-40 N-D '57. (MIRA 11:1)
(HYE--DISEASES AND DEFECTS)

KSENZENKO, S. A.

Ksenzenko, S. A. "An artificial vagina for hoses, with pressure regulator,"
Trudy Dnepropetr. s.-kh. in-ta, Vol. II-III, 1948, p. 91-93

SO: U-3261, 10 April 53, (Letopis 'shurnal 'nykh Statey, No. 12, 1949)

KONENKOV, S. A.

Horse Breeding

Effect of pressure in the artificial vagina on the ejaculation of stallions.
Trudy Dnepr. sel'khoz. inst. 4, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

S.A.

KSENZENKO (Asst Professor Kiev Vet Inst)

"The Role of Artificial Insemination in the Fight Against Sterility in Cattle"

Report given at 13th Inter-VUZ (Higher Educational Insts.) Scientific-Industrial Conference, held February 1966 at Kiev Vet Inst.

KSENZENZO, S.A., kand.biolog.nauk

Work practices in eliminating sterility in cows on collective farms. Zhivotnovodstvo 21 no.9:58-59 S '59. (MIR 13:1)
(Cows--Diseases and pests) (Trichomoniasis)

MATVEYEV, A.I.; KSENZENKO, S.A., kand.biolog.nauk

State farm station for artificial insemination servicing collective farm herds. Zhivotnovodstvo 23 no.2:53-54 F '61. (MIRA 15:11)

1. Zaveduyushchiy Gosudarstvennoy stantsiyey iskusstvennogo osemneniya sovkhoza "Progress", Dnepropetrovskoy oblasti (for Matveyev).

(Dnepropetrovsk Province—Artificial insemination)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

"APPROVED FOR RELEASE: 03/13/2001

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APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

KSENZHENKO, Vladimir Ivanovich; STASIMOVICH, Dmitriy Sergeyevich;
URAZOV, Georgiy Grigor'yevich, akademik, red. [deceased];
BABUSHKINA, S.I., red.; SHPAK, Ye.G., tekhn.red.

[Technology of bromine and iodine] Tekhnologiya broma i ioda.
Pod obshchey red. G.G.Urazova. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry, 1960. 302 p. (MIRA 13:3)
(Bromine) (Iodine)

KSENZENKO, V. I.; YEROFEYeva, K. A.

Kinetics of the chemisorption of bromine by liquid alkali absorbers.
Khim prom no. 3:207-210 Mr '64. (MIRA 17:5)

KJENZENKO, V.I.; YEROFEYEV, K.A.

Kinetics of the chemisorption of bromine by reducing absorbers.
Khim. prom. no. 4:260-265 Ap '64. (MIPA 17:7)

KSERZHNEK, O.S.

Overvoltage in the evolution of chlorine in isolectric systems.
Zhur. fiz. khim. 30 no.12:2812 D'56. (MLRA 10:4)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.
(Overvoltage) (Chlorine)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

*✓ Value 550μ , 1000-1000-1000 (20) - The capacity C of the double
electrical layer per c.c. of porous electrode is given by $10^3 a \cdot 2^2$*

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

PPG Electrolyte properties. A table was compiled of the
reduction in the η_{sp}

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

KSENZHEK, O.S.
KSENZHEK, O.S.

Activation energy of electrode processes on porous electrodes.
Ukr.khim.zhur. 23 no.4:443-447 '57. (MIRA 10:10)

1.Dnepropetrovskiy khimiko-tehnologicheskiy institut.
(Electrodes) Porosity

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

AUTHORS: Stender, V.V. and Ksenzhek, O.S. SOV/80-59-1-18/44

TITLE: Graphitized Anodes in Electrolysis of Aqueous Solutions of Chlorous Salts (Grafitirovannyye anody pri elektrolize vodnykh rastvorov khloristykh soley)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 110-121 (USSR)

ABSTRACT: The authors studied the functioning of graphite anodes in the electrolysis of chlorous solutions on 17 kinds of artificial graphites of various origin and structure. The methods employed in this investigation were based on the non-stationary polarization. As a result the data were obtained which characterize the kinetics of the process of chlorine separation on graphite, and information was secured on the magnitude of the specific surface of different kinds of graphites. In spite of the difference of the graphite kinds, the magnitude of exchange current during the chlorine separation is practically the same and equals to $5 \cdot 10^{-6}$ amp/cm² at 20°C. The specific surface amounts to 0.8 to 1.5 m²/g for the well-graphitized samples and 2.5 to 6 m²/g for the less graphitized samples. The magnitudes of the actual density of current, effective electrode thickness and polarization under various conditions were calculated. It was established that the differences in the electrochemical behavior of various graphite samples were determined mainly by their structural properties.

Card 1/2

SOV/EC-59-1-16,4.

Graphitized Anodes in Electrolysis of Equeous Solutions of Chlorous Salts

There are 3 graphs, 1 diagram, 3 tables and 22 references,
14 of which are Soviet, 4 English, 1 American and 3 German.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskiy institut (Dne-
propetrovsk Chemico-Technological Institute)

SUBMITTED: June 13, 1957

Card 2/2

5.4300

77629
SOV/80-33-2-4/52

AUTHORS: Ksenzhek, O. S., Solovey, Z. V.

TITLE: Kinetics of Graphite Oxidation With Hypochlorite and
Hypochlorous AcidPERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2
pp 279-283 (USSR)ABSTRACT: The article describes an investigation of the kinetics of graphite oxidation with hypochlorous acid and hypochlorite. The effects of the graphite surface area, solution pH, and temperature on the oxidation rates are given in Fig. 1 through 3. Experiments were conducted with three different types of powdered graphite. The reaction rate constants were obtained using a large excess of graphite powder. At 70° C the graphite oxidation rate was found for acid solutions ($\text{pH} < 6$) to be $K \approx 4 \cdot 10^{-7}$ cm/sec and basic solutions $K \approx 0.6 \cdot 10^{-7}$ cm/sec. It was found that the graphite oxidation

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Kinetics of Graphite Oxidation With
Hypochlorite and Hypochlorous Acid

77629
SOV/80-33-2-4/52

rate in an acid solution increases approximately by a factor of 2 when there is a great excess of NaCl. Activation energy for the reaction between graphite and hypochlorite was found to be approximately 12 kcal and between graphite and hypochlorous acid -- 23 kcal. There are 3 figures; and 8 references, 3 U.S., 2 German, 3 Soviet. The 3 U.S. references are: M. Janes, Trans. Electroch. Soc., 77, 13 (1940); H. H. Heller, Trans. Electroch. Soc., 87, 501 (1945); M. Janes, N. Johnson, E. Pilcher, J. Electroch. Soc., 102, 474 (1955). ✓

ASSOCIATION: Dnepropetrovsk Chemical and Technological Institute
(Dnepropetrovskiy khimiko-tehnologicheskiy institut)

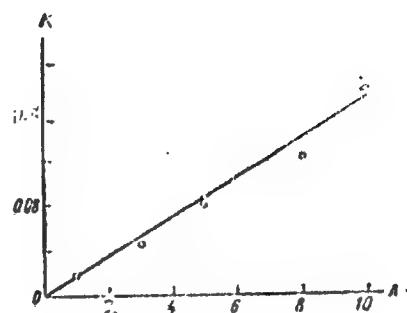
SUBMITTED: October 31, 1958

Card 2/4

Kinetics of Graphite Oxidation With
Hypochlorite and Hypochlorous Acid

77629
SOV/80-33-2-4/52

Fig. 1. Graphite decomposition rate
K as a function of the amount of
graphite (A). pH = 8.04, t =
= 70° C.



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77629 SOV/80-33-2-4/52

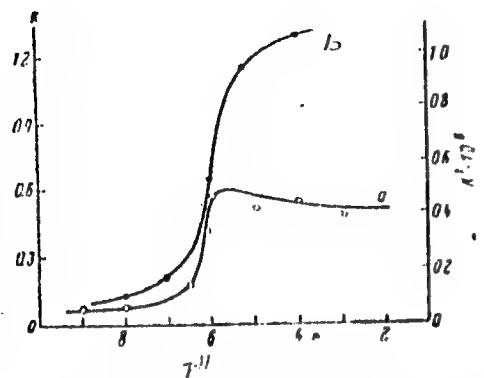


Fig. 2. Graphite oxidation rate constant as a function of pH. (a) pure hypochlorite solution, (b) 240 g/l hypochlorite solution.

Card 4/4

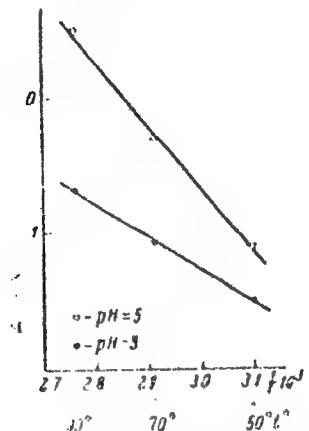


Fig. 3. Graphite oxidation rate K as a function of temperature.

STENDER, Vladimir Vil'gel'movich, prof., doktor tekhn. nauk. Prini-
mali uchastiye: KSENZHEK, Oktavian Stanislavovich, dots.,
kand. tekhn. nauk; RAZINA, Ninel' Fedorovna, dots., kand. tekhn.
nauk; SAGOYAN, Leonid Nikolayevich, dots., kand. tekhn. nauk;
SLUTSKIY, Iosif Zinov'yevich, dots., kand. tekhn. nauk; GALINKER,
I.S., prof., otd. red.; TRET'YAKOVA, A.N., red.; TROFIMENKO, A.S.,
tekhn. red.

[Applied electrochemistry] Prikladnaia elektrokhimiia. Khar'kov,
Izd-vo Khar'kovskogo gos.univ. im. A.M.Gor'kogo, 1961. 538 p.
(MIRA 15:6)

(Electrochemistry)

S 080/62/035/008/004/009
D202/D308

AUTHORS: Ksenzhek, O.S., and Chaykovskaya, V.M.

TITLE: The anodic oxidation of graphite

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 8, 1962,
1786 - 1790

TEXT: A continuation of a previous work; in the present study the authors attempted to obtain fundamental data concerning the velocity of the anodic process, when its effect is the evolution of O_2 or formation of the reaction products of O_2 with graphite. The method consisted of plotting temperatures and low current density (20 - 80°C and 15 $\mu A/cm^2$ respectively), and node polarization curves at 40° and $5 \times 10^{-5} - 4 \times 10^{-4} A/cm^2$. During anodic polarization of graphite a gradual oxidation of its surface takes place, which is accompanied by a rise of potential. After prolonged polarization (up to 80 h) a stationary potential is established, which is approximately 150 mv more negative than that of oxygen in the same solution (in the pH range of 0-5). Further polarization causes a

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S/080/62/035/008/004/009
D202/D308

The anodic oxidation of graphite

change of this potential owing to the decrease of the rate of O_2 evolution or that of the decomposition of surface oxides. The fundamental kinetic characteristics of this process were: exchange current - $3.5 \times 10^{-12} \text{ a/cm}^2$ at 20°C and $4.2 \times 10^{-10} \text{ a/cm}^2$ at 80°C ; the energy of activation - 16.6 kcal; pH of the solution (in the range 0-5) and the presence of Cl^- ions have no appreciable effects. There are 3 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy khimiko-technologicheskiy institut imeni F.E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology, imeni F.E. Dzerzhinskiy)

SUBMITTED: July 7, 1961

Card 2/2

KOENIGER, G. F.

Polarization of fine porous electrodes. Zelen. G. F. Koeniger, 36
no. 38632-637 Mr. 162.
(MUSA 2782)

1. Dnepropetrovskiy khimkotekhnologicheskiy in. MIAU.

KSENJEK, O.S. [Ksenzhek, O.S.]; CEAIKOVSKAIA, V.M. [Chaykovskaya, V.M.]

Study of anodic oxidation process of graphite. Analele chimie 18
no.2:190-196 Ap-Je '63.

KSENZHAEK, O.S.

Capillary equilibrium in porous media with intersecting pores.
Zhur. fiz. khim. 37 no.6:1297-1303 Je '63. (MIRA 16:7)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.
(Porous materials) (Capillarity)

KSENZHEK, O. S.

"Macrokinetics of Processes Occurring on Porous Electrodes."

Report presented at the 11th meeting CITCE, Intl. Comm. of Electrochemical Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

Chemico-Technological Institute, Dnepropetrowsk, USSR.

KSENZHEK, O.S.

Transient processes in the charging of porous electrodes.
Zhur. fiz. khim. 37 no.9:2007-2011 S '63. (MIRA 16:12)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

KLEMZHEK, O. N. and SIENIEN, V. V.

"Porous electrodes and their application in electrochemical processes"

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963.

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)
JPRS 24,651 19 May 64

S/0032/64/030/002/0237/0238

ACCESSION NR: AP4013316

AUTHORS: Ksenzhek, O. S.; Melinovskiy, Ye. A.; Koshelev, N. D.

TITLE: Laboratory electrolyzer for the production of hydrogen

SOURCE: Zavodskaya laboratoriya, v. 30, no. 2, 1964, 237-238

TOPIC TAGS: hydrogen, hydrogen production, electrolysis, electrolyzer, outlet tube electrode, nickel, powdered nickel, microgranular nickel, amalgamated electrode

ABSTRACT: The main parts of the electrolyzer consist of an electrode, and a cathode which is a flat, round porous nickel box with a cavity inside, provided with an outlet tube for the hydrogen formed during electrolysis. The walls of the box are a multilayered structure of pressed and sintered powdered nickel, the outer layer (approximately 0.5 mm thick) having the finest structure, while the second and third layers are made of macrogranular nickel. The issuing material consists of carbonyl nickel with particle size averaging $5\text{ }\mu$. To prepare the macrogranular layer, the fine material is first sintered into agglomerates of $200-250\text{ }\mu$ which are mixed with ammonium bicarbonates, pressed in a mold at 1.5 T/cm^2 , then sintered for 4 hours while the temperature is brought up to 600-700°C. A hole is drilled to the central cavity and a metallic tube welded into it. The porous electrode is then plated with

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ACCESSION NR: AP4013316

copper, followed by amalgamation with mercury. When an electrode with pores 2 μ in diameter is in operation, the pressure of hydrogen within the pores amounts to 1 atm, and a continuous flow of hydrogen passes through the tube. The prepared electrodes are mounted in the electrolyzer with solid anodes of nickel. Orig. art. has: 3 figures.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskiy institut (Dnepropetrovsk Chemical and Technological Institute)

SUBMITTED: 00

DATE ACQ: 26Feb64

ENCL: 01

SUB CODE: CH

NO REF Sov: 000

OTHER: 001

Card 2/3

KERZHNIK, O.S.

Working range of gas-diffusion electrodes under concentration polarization operating conditions. Ukr. khim. zhur. 30 no.8: 810-817 '64. (MIRA 17:11)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

KSENZHEK, O.S.; KALINOVSKIY, Ye.A.; BASKIN, Ye.L.

Conductivity of the electrolyte in porous nickel electrodes.
Zhur.prikl. khim. 37 no. 5:1045-1052 My '64. (MIRA 17:7)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

KALINOVSKIY, O.S.; KALINOVSKIY, Ye.A.

Oxidation of hydrogen on a porous nickel electrode. Zhur. prikl. khim. 37 no.6:1256-1260 Je '64. (MIRA 18:3)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

KERZHNIK, L.S.; KALINOVSKII, Ye. A.; TYDYACHENII, V.P.

Diffusion and flow of gas through porous nickel electrodes.
Zhur. prikl. khim. 37 no.12:2619-2624 D '64.

(MIRA 18:3)

KSENZHEK, O.S.

All-Union Seminar on the theory of porous electrodes. Zhur. fiz.
khim. 38 no.6:1706 Je '64. (MIR 18:3)

KSFICHEK, O.S.

Transient processes in the charging of porous electrodes. Part 2.
Zhur. fiz. khim. 38 no.7:1846-1849 JI '64.

(MIRA 18:3)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

equilibrium in a system

Journal fizicheskoy khimii, v. 38, no. 11, 1964, 2507-2503

6 equations.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

KSENZHEK, O.S.; KALINOVSKIY, Ye.A.

Scheme of compensation of ohmic voltage drop in polarization measurements. Ukr. khim. zhur. 31 no.6:640-641 '65. (MIRA 18:7)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.

KSENZHEK, O. S.

"Transport phenomena and macrokinetics of electrochemical processes on porous electrodes."

report submitted for Intl Mtg on Fuels Cells Research & Their Applications,
Brussels, 21-24 Jun 65.

Inst of Chemical Technology, Dnepropetrovsk.

KSENZHUK, I. G.

PHASE I BOOK EXPLOITATION

SOV/4857

Kozhevnikov, Vasiliy Yakovlevich, Ivan Gavrilovich Kseñzhuk, and
Ivan Ivanovich Khudyakov

Gorizontal'no-kovochnyye mashiny; ustroystvo, elementy rascheta i
obsluzhivaniye (Horizontal Forging Machines; Arrangement, Funda-
mentals of Designing, and Servicing) Moscow, Mashgiz, 1960.
236 p. 6,000 copies printed.

Reviewer: I. I. Girsh, Candidate of Technical Sciences; Eds.:
A. V. Sivay, Docent, and D. B. Rikberg; Chief Ed. (Southern
Department, Mashgiz); V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for technical personnel in facto-
ries, design bureaus, and scientific research organizations.

COVERAGE: The book contains detailed descriptions of Soviet-made
horizontal forging machines (upsetters). The design calculations
of these machines are also given. Basic operational problems
(setting-up, control, servicing) are examined, and brief com-
parative data on non-Soviet upsetters are presented. New

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Horizontal Forging Machines (Cont.)

SOV/4857

constructional solutions of the subassemblies of machines, based on experience gained during their design, manufacture, operation and repair are given special attention. The up-setters built by the Novo-Kramatorskiy mashinostroitel'nyy zavod (New Kramatorsk Machine-Building Plant) have been used to illustrate design calculations, and machine operation and servicing. Chs. II, III, V, IX, and Secs. 1 and 3 of Ch. I were written by V. Ya. Kozhevnikov; Chs. IV, VI, VII, VIII, X, XI, XII, and Sec. 2 of Ch. XIII were written by I. G. Ksenzhuk; I. I. Khudyakov wrote Chs. XIV, and XV, Sec. 2 of Ch. I, and Sec. 1 of Ch. XIII. The theoretical material of Chs. II, III, IV and V pertaining to the construction of kinematic diagrams of the clamping mechanism, the construction of the cycle diagram and the determination of the angles of action of cams were taken primarily from works published during 1946-1956 by I. I. Girsh, Candidate of Technical Sciences, (TsNIITMASh). The authors thank Engineers B. S. Karasev, Yu. N. Lyubimov, and A. I. Shilo for their help. There are 21 references, all Soviet.

Card ~~2/9~~

KSENZHUK, I.G.

Horizontal forging machines. Sbor. Novo-Kram. mashinostroi.
zav. no. 3:13-33 '59. (MIRA 17:1)

S/115/60/000/05/11/034
B007/B011

AUTHORS: Breydo, I. Ya., Kaenzhuk, N. K.

TITLE: Electronic Quick-operation Tachometer With Programming
and Decatrons

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 5, pp. 17-20

TEXT: A description is given here of an electric pulse speedometer in which the recording of feeler pulses as well as the crystal frequency division occur with the aid of decatrons. The speedometer is provided with a programming system. It permits the automatic recording of pulses within a given period, and thereupon extinguishes the recording and begins a new recording period. It measures speeds of < 0.1 to $2 \cdot 10^4$ rpm with a maximum error of $10^{-2}\%$. The electronic block consists of the following assemblies shown in Fig. 1: input assembly, counter, timer, programming assembly, and feed assembly. The input assembly is shown in Fig. 2, the programming assembly in Fig. 4. The counter consists of decatrons. The circuits used in this system for the decatron starting had been described in the papers of Refs. 3, 4, 5. The counter consists

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Electronic Quick-operation Tachometer With
Programing and Decatrons

8/115/60/000/05/11/034
B007/B011

of six cascades. The timer consists of a 10-ko quartz generator, a buffer stage, a multivibrator, and four frequency divider stages with decatrons. The mode of operation of the device is described and explained. The diagram of Fig. 5 shows the sequence of the control- and working pulses. It is pointed out that the speedometer described here can be utilized, apart from the rpm measurement, also for the frequency measurement up to 20-25 kilocycles, for counting the nonperiodic pulses (e.g., of a counter of nuclear particles) at $t < 50\mu\text{sec}$, as well as in production controls based on the count of the number of pieces. There are 5 figures and 5 references: 4 Soviet and 1 English.

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C

Card 2/2

KSENZOV, D.O.

Two cases of invagination in hemorrhagic vasculitis. Pediatrīa 37
no.11:67-70 N '59. (MIR 13:3)

1. Iz khirurgicheskogo otdeleniya (zaveduyushchiy - M.P. Senatova)
detakoy bol'nitsy imeni Dzerzhinskogo (glavnyy vrach A.N. Kudryashova).
(INTUSSUSCEPTION etiology)
(PURPURA complications)

KSENZOV, D.G.; RABIN, A.G.

Appendicitis related to ascariasis in children. Sov.med. 25 no.12:
130-132 D '61. (MIR 15:2)

1. Iz khirurgicheskogo otdeleniya (zav. M.P.Sanatova) detskoy
bol'nitsy imeni Dzerzhinskogo (ispolnyayushchiy obyazannosti glavnogo
vracha F.F.Malomizh), Moskva.
(APPENDICITIS) (ASCARIOS AND ASCARIASIS)

KSENZOV, D.G. & KLEYMENNOVA, I.I.

Acute cholecystitis in children. Pediatriliia no.8:18-21 '62.

(MIRA 15:10)

1. Iz khirurgicheskogo otdeleliya (zav. M.P.Senatova) Klinicheskoy
detskoy bol'nitsy No. 9 imeni F.E.Dzerzhinskogo (glavnnyy vrach
A.N.Kudryashova), Moskva.
(GALL BLADDER—DISEASES)

KSENZOV, D.G.

Diverticulum of the left ventricle of the heart in a child. Vop.
okh.mat.i det. 7 no.78-79 J1 '62. (MIRA 15:11)

1. Iz khirurgicheskogo otdeleniya (zav. M.P.Senatov) klinicheskoy
detakoy bol'nitsy No. 9 imeni F.E.Dzerzhinskogo (glavnnyy vrach
A.N.Kudryashova) Moskvy.
(HEART—ABNORMALITIES AND DEFORMITIES)

TSIRLIN, B.M., inzhener; KSENZUK, F.A., inzhener.

Heating and rolling large stainless steel ingots. Stal' 16 no.2:
140-143 F '56. (MLR 9:5)

1. Zavod "Zaporozhstal'".
(Steel, Stainless) (Rolling (Metalwork))

Ksenzuk, F. A.

133-10-14/26

AUTHOR: Filonov, V. A., Ksenzuk, F. A., Lola, V. N., and
Khudas, A. L. Engineers.

TITLE: Production of Hot Rolled Plates from the Kh18N25S2 Steel.
(Proizvodstvo Goryachekatanoogo Lista Iz Stali X18H25C2).

PERIODICAL: Stal', 1957, No.10, pp. 917-918 (USSR).

ABSTRACT: Heating of 10.5 t. ingots from X18H25C2 steel and their rolling into slabs, as well as subsequent heating of slabs and their rolling into plates was investigated in order to determine the most suitable practice. According to OCT-5632-51, the above steel should have the following composition: 0.30-0.40% C; <1.5% Mn; 2.0-3.0% Si; <0.035% P; <0.025% S; <17.0-20.0% Cr; 23.0-26.0% Ni. The following heating practice was adopted: temperature of the pit during charging 950°C; rate of heating until soaking period 80-100°C/hr, the temperature of walls during soaking 1200-1220°C; duration of soaking 2 hours 45 min.; total heating time 6 hours 10 min. Two ingots were rolled into slabs (115 x 1050 mm) from one heating in 39 and 35 passes respectively. One ingot was rolled with intermediate heating after 16 passes (thickness 400 mm) for 1 hour 20 min. at 1220°C and subsequent finishing in 23 passes. The maximum value of absolute reduction per pass did not exceed 10-15 mm. The surface quality of all ingots was approximately the

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133-10-14/26

Production of Hot Rolled Plates from the Kh18N25S2 Steel.

same (the depth of cracks reached up to 10 mm). Crop ends of the head part of ingots amounted to 18.5 -20% and of bottom part 4.2 - 4.8%. Cooled slabs were straightened and machined, the loss of metal in machining reached up to 25% (Table 1). Slabs were heated for 3 hours 15 min. at a temperature of 1260°C (Table 2) and rolled on a ten stand continuous hot rolling mill into plates of a cross-section 4 x 1030 mm (rolling conditions - Table 3). Retention of slabs on the mill causes a sharp cooling of their surface making further rolling impossible. Rolling should be carried out at maximum permitted temperatures, therefore water cooling of rolls should be discontinued. Due to discontinuation of cooling, rolling of slabs from the above steel on a continuous mill can be carried out only in small lots. There are 3 tables and 1 Slavic reference.

ASSOCIATION: Zaporozhstal' Works. (Zavod Zaporozhstal').

AVAILABLE: Library of Congress

Card 2/2

L. S. N. 2. 0. m. , E. H.

133-2-19/19

AUTHORS: Filonov, V.A., Podgorodetskiy, A.A., Ksenzuk, F.A. and
Lola, V.I. (Engineers)

TITLE: From Experience in Production of Two Layer (Clad) Ingots
and Slabs (Opyt proizvodstva dvusloynikh slitkov i slabov)

PERIODICAL: 'Stal', 1958, Nr 2, pp.188-191 (USSR)

ABSTRACT: The technology of production of clad ingots and slabs
from steels 20K and X18H12M27 developed on the Zaporozhstal'
Works is described. The method consists of teeming steel
20K into an ingot mould into which a plate from stainless
steel was fixed (Figs. 1, 2). The preparation of stainless
plate, heating (Table 2) and rolling clad ingots, dimensions
of clad slabs (Table 2) and mechanical properties of clad
plate produced (Table 3) are given. There are 3 tables and
4 figures.

ASSOCIATION: Zaporozhstal' Works (Zavod "Zaporozhstal'")

AVAILABLE: Library of Congress.

Card 1/1

18.3200,18.5100

77457
SOV/133-60-1-18/30

AUTHORS: Chirkin, V. M., Ksenzuk, F. A. (Engineers)

TITLE: Causes of Swelling of Carbon Steel Slabs

PERIODICAL: Stal', 1960, Nr 1, pp 59-62 (USSR)

ABSTRACT: This is a report concerning a new defect of metal at the "Zaporozhstal'" Plant (zavod "Zaporozhstal'"), namely, swelling of the slabs, which appeared during the reduction of ingots and also during heating of slabs in continuous furnaces and rolling them on a thin sheet mill. This resulted in the loss of metal and jamming of strips in the finishing group accompanied by the breakdowns of rolls. The analysis of samples of gas, taken from slab's cavities, under the direction of I. A. Goncharov (Engineer), by drilling under water, showed the following composition(%):

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Causes of Swelling of Carbon Steel Slabs

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Type of steel	H ₂	CO	CO ₂	N ₂	CH ₄
St 3 kp	65.0	22.0	5.0	8.0	-
St 3 kp	59.0	13.8	0.3	26.9	-
St 3 ps	52.0	23.0	12.0	12.7	0.3

The check of heating-temperature schedule in the soaking pits for 25 melts (for swollen slabs) gave the following results: (1) number of melts with temperature in all chambers of $\leq 1,360^{\circ}$ C (in keeping with instructions), 5; (2) with temperature in one or several chambers of $1,370-1,390^{\circ}$ C, 9; (3) with temperature in one or several chambers of $\leq 1,400^{\circ}$ C, 11. Therefore, in 20 out of 25 melts the temperature in one or several chambers was higher than that prescribed by the instructions. Some special tests were conducted

Card 2/6

Causes of Swelling of Carbon Steel Slabs

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SOV/133-60-1-18/30

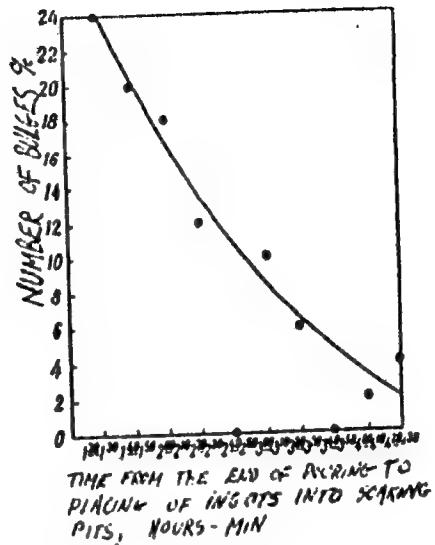
with participation of D. I. Shirinskij, V. N. Lola, A. L. Khudas, and N. V. Pal'chik (Engineers) for verification of the effect of heating of ingots swelling of the slabs (see Fig. 5). The authors also give a diagram of change in gas content during the crystallization of the ingot. The authors mention that in the experimental study of pouring steel St 3 kp, the aftercharge of metal surface (before capping) by ground ferrosilicon was introduced by suggestion of A. I. Marinov and D. I. Shirinskij. The authors arrived at the following conclusions. (1) The swelling of slabs from carbon steel during rolling of ingots on a slabbing mill (when heating the slabs in continuous furnace and rolling same into strip) is explained by the formation of cavities in the ingots. These cavities are filled with highly compressed gases. (2) The abundant liberation of gases in the inner cavities of the ingot is caused first of all by the high general saturation of steel with gases, by the rapid formation of hard crust in the upper portion of the ingot, and by the retarded crystallization of

Card 3/6

Causes of Swelling of Carbon Steel Slabs

77457
SOV/133-60-1-18/30

Fig. 5. The relationship between the number of swellings in slabs and the time elapsed between the end of pouring and placing ingots into soaking pits.

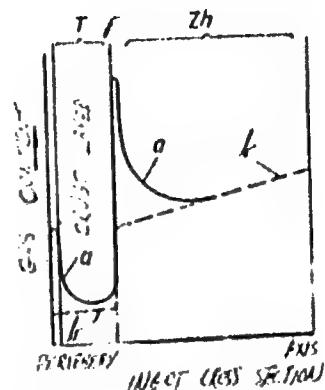


Card 4/6

Causes of Swelling of Carbon Steel Slabs

7757
307/133-60-1-15/10

Fig. 6. A diagram of change in gas content in the section of crystallizing ingot (according to I. N. Golikov, Stal', 1954, Nr 12): (a) probable gas content in the process of crystallization; (b) equilibrium gas content (T, solid metal; Zh, liquid metal; F, front of crystallization).



Card 5/6

Causes of Swelling of Carbon Steel Slabs

77457
305/133-60-1-18/30

metal. (3) For prevention of the above, there should be no deviations from the technological instructions: no decrease in the speed of burning cut of carbon during rimming heat; no feeding into the furnace of undried slag-forming oxidizers and reducers; no tapping of steel into the undried ladle or mixing of metal with slag during tapping and pouring of melt. It should not be allowed: (a) to cover the ingots too early with lids; (b) to move the ingots too early into the soaking pits, or stock-piling same; (c) to increase the temperature of heating ingots in the chamber and to increase the duration of holding the ingots at elevated temperatures. A combined effect of some of the above factors can result in swollen slabs. (4) The practical measures taken by the plant in accordance with the theoretical analysis of the mechanism of formation of swollen slabs (which can be a subject of discussion) proved to be sufficiently effective to prevent the reappearance of the defects. There are 6 figures; and 3 Soviet references.

ASSOCIATION:

Central Scientific Research Institute of Ferrous Metallurgy and the "Zaporozhstal'" Plant (TsNIIChM 1 zavod "Zaporozhstal'") Card 6/6

KSENZUK, F. A., inzh.; LOLA, V. N., inzh.; PAL'CHIK, N. V., inzh.

Investigating the heating and rolling of electrical
steel slabs. Stal' 20 no.8:738-739 Ag '60.
(MIRA 13:7)

1. Zavod "Zaporozh'stal'."
(Rolling(Metalwork))

AUTHORS: Ksenzuk, P. A., Engineer; Troshchenkov, N. A., Engineer
TITLE: The causes of blister formation on 08kn (08kp) cold-rolled
steel sheets
DATE: Mar. 3, 1961, 274 - 276
S/133/61/000/003/013/014
A054/A033

THORS.
TITLE: The causes of
steel sheets
PERIODICAL: 'Stal', no. 3, 1961, 274 - 276
There are many rejects among
gasoline containers (1 - 5
milliliters) due to surface

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-

S/133/61/000/003/013/014
A054/A033

The causes of blister formation

The causes of blister formation
time on hot rolled strips before cold rolling, as well as the casting technology in general were investigated. The pickling assembly used in the tests consisted of four sulfuric acid baths with a concentration of 18, 18, 12 and 9 %, respectively. The pickling speed varied between 40 m/min and 10 m/min. At max. pickling speed holding time in bath 1.8 min and at min. pickling speed holding time in bath 7.2 min. the following results were obtained:

Heats	3773	61079	4929	101144	51046
Sheets rejected on account of blisters, %	11.9	0.0	2.1	10.0	1.6

The tests show that neither the composition, nor the temperature of the bath affected blister formation, only the speed at which the strip passed through the bath, (at top speed about 9 times more blisters were formed than at low speed). However, blister formation cannot be eliminated entirely, even at low pickling speeds. In order to determine the effect of the pouring technology on the formation of non-metallic impurities and, consequently, of blisters, the method and the rate of casting were closely

S/133/61/000/003/013/014
A054/A033

The causes of blister formation

followed. In the tests the metal was additionally impurified by chamotte powder or by not removing the slag. The greatest amount of blisters was found in sheets rolled from the lower part of slabs, made from bottom-poured metal. It is supposed that with bottom poured metal the lower part of the ingot is contaminated by impurities consisting of refractory material that has been dislodged and carried along, and of substances used in assembling the bottom board. When the pouring speed was increased, for instance by pouring two molds at the same time, blister formation was somewhat lower. In sheets from slabs produced by top-pouring the amount of siliceous inclusions and consequently blister formation was considerably less. As a result of the tests, refractory material of the highest quality should be used when casting low-carbon rimmed steel, which has to comply with particularly high standards, and the assembly of the bottom board has to be subjected to a very severe control. In this way blister formation could be reduced to a minimum. In the tests I. S. Marakhovskiy, I. L. Zlatkin, A. I. Marinov, A. I. Koshik, V. N. Lola, L. A. Zagadchenko, Engineers participated. There are 2 figures and 3 Soviet references.

ASSOSIATION: Zavod "Zaporozhstal'" ("Zaporozhstal'" Plant)

Card 3/3

KSENZUK F.A.

S/133/61/000/012/001/006
A054/A127AUTHORS: Soroko, L.N.; Filonov, V.A.; Ksenzuk, F.A.; Tsirlin, B.M.; Pav-
lishchev, V.B.; - EngineersTITLE: Test rolling of stainless steel slabs on the "1200" mill with
reelers in the furnace

PERIODICAL: 'Stal', no. 12, 1961, 1,092 - 1,096

TEXT: The possibility and the advantages of hot rolling stainless steel slabs with double-phase structure on the "1200" reversing mill of the Novolipetsk Plant were studied. The quality of surface and edges and the thickness differences (longitudinally and laterally) of the stainless steel slabs were compared for the "1200" mill and a hot-rolling continuous sheet mill. 22 slabs made of three heats of 1X18H9T (1Kh18N9T) and 2 steel grades of austenite-ferrite structure (A, 18 and B, 6 slabs), totalling 82 tons were rolled during the tests. The slabs were heated in a pusher-type furnace, fuelled by blast-furnace gas. The required heating time was originally fixed at 2 h 40 min, but actually this period varied within wide limits, due to delays in rolling the strip on the finishing stand. The required rolling temperature and heating quality could be en-

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S 133/61/000/012/001/006
A054/A127

Test rolling of stainless steel slabs on....

sured in the pusher-type furnace. When rolling on the roughing stand with 5 passes, the load on the motor increased, sometimes exceeding the maximum load rolling carbon steel slabs 1,000 - 1,500 amp. Further tests were carried out with 7 passes which yielded satisfactory rolling results of the test slabs on the roughing stand. On the finishing stand the load on the main motor did not exceed the limit, as a rule, only the value of the RMS current was somewhat higher, reducing the rolling speed. It was found that some parts of the finishing stand are unsuitable for rolling stainless steel at a temperature at the rolling end of 900 - 920°C. The capacity of the drums is insufficient to coil up strips at a reduced temperature with a non-uniform thickness (up to 13 mm). The guides, the motor, the ball-bearings (with liquid friction) should also be adapted to the set conditions when rolling stainless steel instead of carbon steel. Another drawback of the process tested is that the strip ends, remaining outside the furnace, cool down quickly and this results in differences in strip-thickness, mainly over the strip lengths. On one sector 7 - 10 m long at the end of the strip the maximum deviations in thickness amount to 0.29 - 0.66 mm (at a rated thickness of the test strip of 3 mm), while these deviations amount only to 0.07 - 0.20 when rolling the same strips on the continuus mill. The thickness differences over the strip cross section are about the same as on

Card 2/3

S/133/61/000/012/001/006

A054/A127

Test rolling of stainless steel slabs on

the continuus mill (0.05 - 0.19 mm and 0.07 - 0.17 mm, respectively). Due to the considerable fluctuations in thickness and temperature along the strip it is not reduced uniformly over its entire length and this results in waviness and warping. It was possible to eliminate these defects at the expense of the rolling speed, and, therefore, of the output. The quality of the edges and the surface was better for strips rolled on the "1200" reversing mill with the coils heated in the furnace. There were no cracks at the edges and surface defects of mechanical origin (scratches, grooves) were fewer than in the conventional strips. Hydraulic scale removal was not applied as it was feared to reduce the temperature of the strip ends. Due to this, however, the mill scale on the strip was rolled into the surface and, therefore, it was found more expedient not to use this measure. There are 3 tables.

ASSOCIATION: Zavod "Zaporozhstal" ("Zaporozhstal" Plant)

Card 3/3

YASHNIKOV, D.I., inzh.; TILIK, V.T., inzh.; TROSHCHENKOV, N.A., inzh.;
Prinimali uchastiye: SAMOYLOV, I.D., inzh.; VERBITSKIY, A.I.,
inh.; KRASNIKOV, A.S., inzh.; BURELO, V.G., inzh.; KSENZUK,
F.A., inzh.; MIRKINA, R.Ye., inzh.; GOL'DSHEIN, F., inzh.;
BOZHKO, S.A., inzh.

Reducing the consumption of tin in improving the microgeometry
of sheet iron surfaces. Stal' 21 no.9:862-864 S '61. (MIRA 14:9)

1. Zavod "Zaporozhstal'".
(Tinning) (Surfaces (Technology))

SOROKO, L.N., inzh.; FILONOV, V.A., inzh.; KSENZUK, F.A., inzh.;
TSIRLIN, B.M., inzh.; PAVLISHCHEV, V.B., inzh. Prinimali
uchastiye: BABAkov, A.A.; BOROVSKIY, V.V.; YASHCHENKO, B.V.;
LAZUTIN, A.G.; ZAVERYUKHA, A.Kh.; FRANTSENYUK, I.V.; ORLOVA, T.K.

Experimental rolling of stainless steel slabs on a 1200 mill
with coilers in the furnace. Stal' 21 no.12:1092-1096 D '61.
(MIRA 14:12)

1. Zavod "Zaporozhstal'" (for Soroko, Filonov, Ksenzuk,
TSirlin, Pavlishchev).

(Rolling mills—Equipment and supplies)
(Steel, Stainless)

MEL'TSER, V.V., dotsent, kand.tekhn.nauk; PRATUSEVICH, A.Ye., inzh.;
KSENZUK, F.A., inzh.; LEDKOV, V.G., inzh.

"Hot sheet rolling on continuous and semicontinuous mills"
by M.M.Saf'ian. Reviewed by V.V.Mel'tser and others. Stal'
22 no.9:832-834 S '62. (MIRA 15:11)

1. Magnitogorskiy gornometallurgicheskiy institut i Magnitogorskiy
metallurgicheskiy kombinat (for Mel'tser, Pratusevich). 2. Zavod
"Zaporozhstal'" (for Ksenzuk, Ledkov).
(Rolling (Metalwork)) (Saf'ian, M.M.)

PHASE I BOOK EXPLOITATION

SOV/6512

Kaenzuk, Peofan Andreyevich, and Nikolay Alekseyevich Troschenkov

Prokatka i otdelka polosovoy nerzhaveyushchey stali (Rolling and
Finishing of Stainless Steel Strips) Moscow, Metallurgizdat,
1963. 205 p. Errata slip inserted. 2500 copies printed.

Ed. of Publishing House: V. M. Gorobinchenko; Tech. Ed.: L. V.
Dobuzhinskaya.

PURPOSE: This book is intended for engineering personnel, foremen,
and skilled workmen of rolling shops which produce stainless
steel sheets and plates. It may also be useful to designers
of planning organizations and students at schools of higher
education.

COVERAGE: The book describes the process of making stainless
steel sheets and plates. Characteristics of hot and cold

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Rolling and Finishing (Cont.)

SOV/6512

rolling mills for stainless steel are presented, and methods of preparation of ingots and slabs for rolling are reviewed. The book gives a classification of stainless steels with a description of their basic properties and the dependence of these properties on conditions of heat treatment and cold rolling. Modern technology of cold rolling, heat treatment, and pickling of strips is discussed. Various types of defects and methods of preventing them are outlined. No personalities are mentioned. There are 98 references, mostly Soviet.

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2. Chromium-nickel steels	9

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8/133/63/000/001/008/011
A054/A126

AUTHORS: Chekmarev, A. P., Saf'yan, M. M., Kholodnyy, V. G., Soroko, L. N.,
Kaenzuk, F. A.

TITLE: Determination of the strip temperature during rolling on continuous
thin strip mills

PERIODICAL: Stal', no. 1, 1963, 62 - 65

TEXT: A uniform structure of the strip with a grain size that ensures the required mechanical characteristics can only be obtained, if the end temperature of rolling is higher than Ar_3 and the temperature of coiling is below 680°C. To determine the factors affecting the strip temperature during rolling, extensive tests were carried out at the zavod "Zaporozhstal'" ("Zaporozhstal'" Plant) on the 1,680 mm mill, covering the slab temperature from the time the product was in the heating section of the furnace onward through its passing the roughing mill (beyond the IV stand of this group), before the V finishing stand and beyond the X stand, by means of photoelectric pyrometers and also with a portable radiation tube at various spots between the stands of the finishing

Card 1/3

Determination of the strip temperature...

S/133/63/000/001/008/011
A054/A126

group. The effects of the heat absorbed by the slab during heating, the cooling time, the cooling methods, the strip surface-to-volume ratio, the chemical composition of the steel, the strip thickness and the rolling rate on the strip temperature were studied. In the tests, stainless [1 X 18 H 9 T (1Kh18N9T)] and carbon [C r.3kN (St.3kp)] grades were rolled to sizes, varying between 3 x 1,030 and 6 x 1,232 mm. The temperature changes on the finishing stands, the effect of the rolling rate on the X stand and of strip thickness on the end temperature are shown in 8 graphs. At equal temperatures, strip thicknesses and rolling conditions, the end temperature of rolling for stainless steel strips is about 50 - 60°C higher than for carbon steel strips of the same dimensions. Increasing the rolling rate on the X stand by 10 m/min raises the end temperature of rolling for carbon steels by 2 - 3°C and for stainless steels by 5 - 6°C. By reference to the test results on the finishing stands and known equations used in temperature calculations the following empirical formulae were drawn up:

$$t = 815 + \frac{228(h-2)}{(h-2) + 2.57} \quad (3) \quad \text{for carbon steels and}$$

$$t = 920 + \frac{71(h-3)}{(h-3) + 0.76} \quad (4) \quad \text{for stainless steels,}$$

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8/133/63/000/001/008/011
A054/A126

Determination of the strip temperature...

(where h = the thickness of the strip beyond the stand in question, in mm). The formulae can be used for rolling conditions similar to those on the 1,680 mm mill. The graphs show a satisfactory similarity of the test results and the data obtained by the above formulae. There are 3 sets of graphs and 2 tables.

Card 3/3

KSENZUK, F.A.; TSELOVAL'NIKOV, V.M.; TILIK, V.T.; TROSHCHENKOV, N.A.

Increasing the output of a continuous three-high cold rolling mill.
Met.i gornorud. prom. no.6:27-29 N.D '63. (MIRA 18:1)

YEFIMOV, Ye.A.; SAPKO, V.N.; GREBENYUK, V.P.; PIORO, E.Ch.; SHCHASTNYY, P.M.; KSENZUK, F.A.; SHIRINSKIY, D.I.; TOLSTYKH, V.I.

Rapid top pouring of rimmed steel into ribbed ingot molds. Metal-lurg 8 no.11:17-19 N '63. (MIRA 16:12)

ACCESSION NR: AT4014063

8/3072/63/000/000/0080/0088

AUTHOR: Ksenzuk, F. A.; Troshchenko, N. A.; Tiliik, V. T.

TITLE: Technological lubricants for cold rolling of sheet and thin plate

SOURCE: Fiz.-khim. zakonomernosti deystviya smazok pri obrabotke metallov
davleniem. Moscow, Izd-vo AN SSSR, 1963, 80-88TOPIC TAGS: cold rolling, rolling mill, lubricant beef tallow, castor oil, palm
oil, mineral oil, stainless steel

ABSTRACT: The usually applied 2% emulsion of standard emulsol for cold rolling of sheets is not satisfactory, causing high contact pressure between metal and rolls, enhancing formation of carbon deposit and thus preventing eventual tinning, and not permitting rolling of sheets thinner than 0.25 mm. Therefore, other technological lubricants have been tried, such as refined cottonseed oil, hydrogenated sperm oil, palm oil, beef tallow, castor oil, and hydrogenated vegetable oils. Best results in rolling have been obtained with beef tallow and castor oil. However, beef tallow has caused clogging of drain pipes, due to its high melting point. For the same reason hydrogenated sperm oil has proven to be inadequate. Cotton-

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ACCESSION NR: AT4014063

seed oil has been ruled out for its high cost. Palm oil and castor oil have been accepted as best and have been the basic lubricants for sheet rolling during the last three years. However, these oils also have substantial deficiencies. Palm oil is oxidized considerably after storage times above six months, and consequently loses its effectiveness as lubricant; also, it is an imported item. With castor oil, it is difficult to obtain uniform sheet thickness in rolling; furthermore, it is a scarce product. Hydrogenated sunflower-seed oil has been proposed and tried as lubricant for sheet rolling (lubricant PKS-1) and has been found to be nearly equivalent to palm oil. It has been found that by application of effective technological lubricants on one-unit rolling mills, the production can be raised by 30-40% because of reduction of number of passes from 3 to 2. On three-unit rolling mills, rolling of sheets can be done down to a thickness of 0.20 to 0.22 mm; also, an intermediate anneal can be abolished in rolling of No. 28 and 32 sheets. Furthermore, it has been found that failures of rolls and bearings are reduced, and the quality output of tinplate is raised up to 95%. However, lubricant PKS-1 is made from raw food material. Therefore, since 1960 a search for new technological

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ACCESSION NR: AT4014063

lubricants has been under way. Mineral oils of various viscosities, mineral oils with addition of different fatty acids and vegetable oils, and, for comparison, pure vegetable oils have been tested on a one-unit rolling mill. It has been found that lubricants of higher viscosity correspond to higher stretching coefficients in rolling. The best of the tested mineral lubricants has been cylinder oil No.6. However, difficulties have been experienced in spreading this viscous lubricant on the work. Therefore, preference has been given to cylinder oil No.24 (viscosin), which is equivalent to PKS-1 with respect to stretching of sheet and power requirement but approximately 40 times less expensive. However, the surface quality of sheets has been different when using viscosin or PKS-1. With PKS-1 a shiny smooth surface has been produced, while with viscosin the finished surface has been dull, with white spots from rolled-in oil which sometimes made complete degreasing difficult. It has been concluded that high viscosity mineral oils can be advantageously used as technological lubricants in cold rolling of thin sheets and plates, instead of expensive oils of vegetable or animal origin. For manufacture of cold rolled stainless sheets of 0.8-1.4 mm thickness, strips 1.5-1.8 mm thick have been subjected to intermediate heat treatment and pickling, and then rolled to final thickness. Spindle oil has been used as the lubricant. Under such conditions a great amount of rework was needed and the sheet quality was low.

Card 3/4

REF ID: A14014003

Instead of the above procedure, cold rolling of stainless steel strips of 0.7; 0.8; 0.9; 1.0; 1.2; 1.3; and 1.4 mm from prerolled sheet 3 mm thick without intermediate heat treatment has been adopted. Such rolling has been made possible by using polished rolls and P-28 oil and viscosin as lubricants. Total reduction of sheet thickness without preliminary heating has been increased from 50-55 to 77%, not only for austenitic but also for steels of lower plasticity, such as austenitic-ferritic, austenitic-martensitic, and ferritic-martensitic stainless steels without occurrence of edge tearing. The number of passes for rolling 0.8 and 1.0 mm thick strips has been reduced from 14 and 12 to 11 and 9, respectively; surface quality has improved, and driving power and pressure on rolls have not been excessive. Production has been increased by 70%, by applying higher speed with fewer passes. For rolling of 1.5-2.5 thick stainless strips, spindle oil has been retained as the lubricant. The use of high viscosity mineral lubricants, such as viscosin, has proved adequate also for cold rolling of thin (0.35 mm) transformer steel sheets. Orig. art. has: 11 tables.

SUBMITTED: 00

DATE ACQ: 19Dec64

ENCL: 00

SUB CODE: MM IE

NO REP Sov: 004

OTHER: 000

Card 4/4

KSENZUK, F.A., inzh.; KHUDAS, A.L., inzh.; TROSHCHENKOV, N.A., inzh.;
GAMERSHTEYN, V.A., inzh.; AKIMOV, E.P., inzh.; IOPFE, M.M., inzh.;
VEKLICH, M.I., inzh.; ANTIOPENKO, V.G., inzh.; TILIK, V.T., inzh.;
FILONOV, V.A., inzh. [deceased]; BORISENKO, V.G., inzh.

At the "Zaporozhstal" plant. Stal' 23 no.6:554, 562, 572, 575
Je '63. (MIRA 16:10)

SOV/6512

PHASE I BOOK EXPLOITATION

Ksenzuk, Feofan Andreyevich, and Nikolay Alekseyevich Troschenkov

Prokatka i otdelka polosovoy nerzhaveyushchey stali (Rolling and
Finishing of Stainless Steel Strips) Moscow, Metallurgizdat,
1963. 205 p. Errata slip inserted. 2500 copies printed.

Ed. of Publishing House: V. M. Gorobinchenko; Tech. Ed.: L. V.
Dobuzhinskaya.

PURPOSE: This book is intended for engineering personnel, foremen,
and skilled workmen of rolling shops which produce stainless
steel sheets and plates. It may also be useful to designers
of planning organizations and students at schools of higher
education.

COVERAGE: The book describes the process of making stainless
steel sheets and plates. Characteristics of hot and cold

Card 1/7

Rolling and Finishing (Cont.)

SOV/6512

rolling mills for stainless steel are presented, and methods of preparation of ingots and slabs for rolling are reviewed. The book gives a classification of stainless steels with a description of their basic properties and the dependence of these properties on conditions of heat treatment and cold rolling. Modern technology of cold rolling, heat treatment, and pickling of strips is discussed. Various types of defects and methods of preventing them are outlined. No personalities are mentioned. There are 98 references, mostly Soviet.

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"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

Chesnarev, A. P., Safyan, M. M., Kholedov

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8

has 3 graphs, 3 tables, and 6 figures.

Uralvodororsk Metallurgical

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000827010005-8"

GANERGHTYAN, V.A.; KELZUK, F.A.

Introducing the technology for rolling corrugated sections
of low-alloyed steel. Biul. tekhn.-ekon. inform. Gos. nauch.-
issl. inst. nauch. i tekhn. inform. 17 no.4:3-4 Ap '64.
(MIRA 17:6)

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Changes in steel properties depending on the degree of
reduction during coil straightening. Stal' 24 no.1:56-58
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ORG: none

TITLE: Improvements in the techniques of production of Kh18NI0T cold-rolled wide-strip
steel at the Zaporozhstal' Plant

SOURCE: Dnepropetrovsk. Institut chernoy metallurgii. Trudy, v. 21, 1965. Prokatnoye
proizvodstvo (Welding production), 38-52

TOPIC TAGS: stainless steel, bright stock lubricant, metal rolling, sheet metal, industrial
plant / Kh18NI0T stainless steel, P-28 bright stock lubricant

ABSTRACT: On increasing to 11.8 tons from the previous 10.3 tons the weight of the ingots

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7

of Kh18Ni10T stainless steel used to produce 1000 mm wide sheets, the Zaporozhstal' Plant found it possible to reduce by 40-50 kg/mm² the wastage of metal during slabbing. Other innovations introduced in recent years at this plant include: settling, flame scarfing and planing of ingot surfaces so as to eliminate defects of metallurgical origin prior to slabbing. These measures, along with improvements in the ingot reheating regime, have made it possible to increase the productivity of slabbing mills by 15-20%. The ingots themselves are cone-shaped in order to optimize the conditions of crystallization of the molten metal. After trimming and heating to 1050-1300°C the slabs proceed to a continuous strip mill where they are rolled into 1000 mm wide strip. By introducing the cold rolling of this strip in a reversible four-high mill with a reduction of 85% and by abandoning the practice of intermediate quenching during the production of 0.8-1.4 mm thick sheets rolled from 3.0 mm thick stock, using P-28 bright stock (highly viscous mineral oil) as the lubricant, using highly polished rolls, and increasing the convexity of the rolls to offset the increase in roll pressure, and thus streamlining the rolling techniques to an extent at which it became possible to roll in 13 passes 0.8 mm thick strip without overloading the rolls and main drive, the Zaporozhstal' Plant has found it possible to increase by 81% the productivity of its sheet mill and by 180%, the productivity of its reversible cold-rolling mill. The annual savings produced by these innovations amount to: for the slabbing-mill shop, 162,000 rubles; for the sheet-mill shop, 91,000 rubles; for the cold rolling shop, 719,000 rubles. Orig. art. has: 3 figures, 9 tables.

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Card 2/3 LL

KRUPINSKIY, B., prof. (Pol'skaya Narodnaya Respublika); BROMOVICH, R.,
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Effect of ventilation on the selection of the mine model. Ugol' 36
no. 12:48-54. D '61.
(Mine ventilation) (MIRA 14:12)